

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A stepping motor comprising:

a rotor including a permanent magnet ~~and~~ magnetized in multipoles;

a plurality of coils ~~arranged at a surrounding of~~ the rotor and wound around a radius direction of the rotor;

a cylindrical supporter for supporting the plurality of coils, said supporter including a flexible board ~~an insulating film having a flexibility~~; and

a casing for surrounding the permanent magnet, the plurality of coils and the supporter and fixed to the supporter,

wherein the flexible board includes a wiring pattern one end portion of which is electrically connected to the plurality of coils, and a terminal portion at which another end portion of the wiring pattern aggregates.

2.-3. Canceled

4. (Currently amended) The stepping motor according to claim 1 ~~3~~, wherein the terminal portion is projected to outside of the casing.

5. (Currently amended) A stepping motor comprising:

a rotor including a permanent magnet magnetized in multipoles;

a plurality of coils surrounding the rotor and wound around a radius direction of
the rotor;

a cylindrical supporter for supporting the plurality of coils including an insulating film having a flexibility;

a casing for surrounding the permanent magnet, the plurality of coils and the supporter and fixed to the supporter; and

~~The stepping motor according to claim 1 further comprising~~ a cylindrical member constituted by winding in a helical shape a soft magnetic material in a strip-like shape a surface of which is insulatingly covered ~~in a helical shape~~.

6. (Currently amended) A stepping motor comprising:

a rotor including a permanent magnet magnetized in multipoles;

a plurality of coils surrounding the rotor and wound around a radius direction of the rotor;

a cylindrical supporter for supporting the plurality of coils including an insulating film having a flexibility; and

a casing for surrounding the permanent magnet, the plurality of coils and the supporter and fixed to the supporter;

~~The stepping motor according to Claim 1,~~ wherein the rotor includes:

the permanent magnet magnetized in a single pole in an axial ~~line~~ direction;

a plurality of magnetic pole teeth arranged at a surrounding of the permanent magnet and extended in an axial ~~line~~ direction of the permanent magnet; and

a pair of circular plate members respectively connected to end portions of the permanent magnet for supporting the magnetic pole teeth, and

wherein the magnetic pole teeth are alternately formed on one of the circular plate members and on the other of the circular plate members.

7. (Currently amended) A stepping motor comprising:
a rotor including a permanent magnet magnetized in multipoles;
a plurality of coils surrounding the rotor and wound around a radius direction of
the rotor;
a cylindrical supporter for supporting the plurality of coils including an insulating
film having a flexibility; and
a casing for surrounding the permanent magnet, the plurality of coils and the
supporter and fixed to the supporter.

~~The stepping motor according to claim 1,~~ wherein a thickness of the insulating film falls in a range from 0.1mm to 0.2mm.

8.-10. Canceled

11. (New) A stepping motor comprising:
a rotor including a permanent magnet and magnetized in multipoles;
a plurality of coils surrounding the rotor and wound around a radius direction of the rotor;
a cylindrical supporter for supporting the plurality of coils including an insulating film having a flexibility;
a casing for surrounding the permanent magnet, the plurality of coils and the supporter and fixed to the supporter; and
a cylindrical member constituted by winding in a helical shape a strip comprising soft magnetic material.

12. (New) A stepping motor comprising:

a rotor including a permanent magnet magnetized in a single pole in an axial direction;

a plurality of coils surrounding the rotor and wound around a radius direction of the rotor;

a cylindrical supporter for supporting the plurality of coils; and

a casing for surrounding the permanent magnet, the plurality of coils and the supporter,

wherein the rotor includes a plurality of magnetic pole teeth surrounding the permanent magnet, extended in an axial direction of the permanent magnet, and connected to the permanent magnet; and

wherein the magnetic pole teeth are alternately connected to one end of the permanent magnet and to the other end of the permanent magnet.

13. (New) The stepping motor according to claim 1, wherein said terminal portion is projected outside of said stepping motor to facilitate electrical connection with a control circuit.

14. (New) The stepping motor according to claim 1, wherein said plurality of coils is fixed to said supporter by one of an adhesive and a tape.

15. (New) The stepping motor according to claim 1, wherein said flexible board comprises an insulating material, a copper foil and a base material.

16. (New) The stepping motor according to claim 1, wherein said supporter is fixed to an inner face of said casing by an adhesive.
17. (New) The stepping motor according to claim 1, wherein said plurality of coils comprises a hollow center core.
18. (New) The stepping motor according to claim 1, wherein said plurality of coils comprises a core comprising a non-magnetic resin material.